

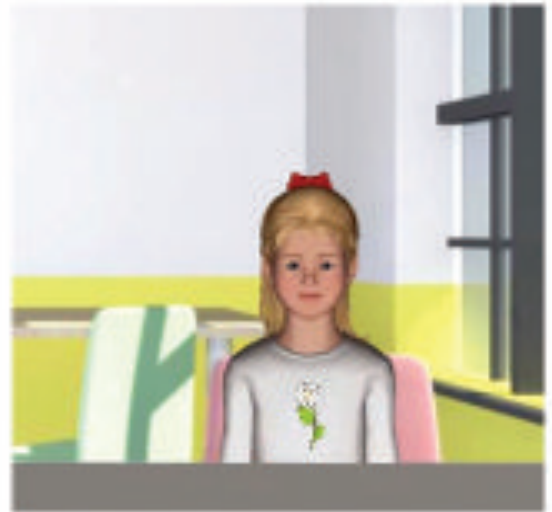
Referral Information



Referred By:
Teacher

Referred Information:

Kara Lynn, a three year-six month old, was referred for assessment by her preschool teacher because of her unintelligible speech. You are the school based speech-language pathologist responsible for completing her evaluation.



ASK KARA LYNN A QUESTION

SimuCaseTM

User Guide 2.0

Leigha J. Jansen, Ed.D., CCC-A
 Clint Johnson, M.A., CCC-SLP
 Katie Ondo, M.A., CCC-SLP
 Brenda Pantalone, M.Ed.
 Stacy L. Williams, Ph.D.

© 2014 SpeechPathology.com

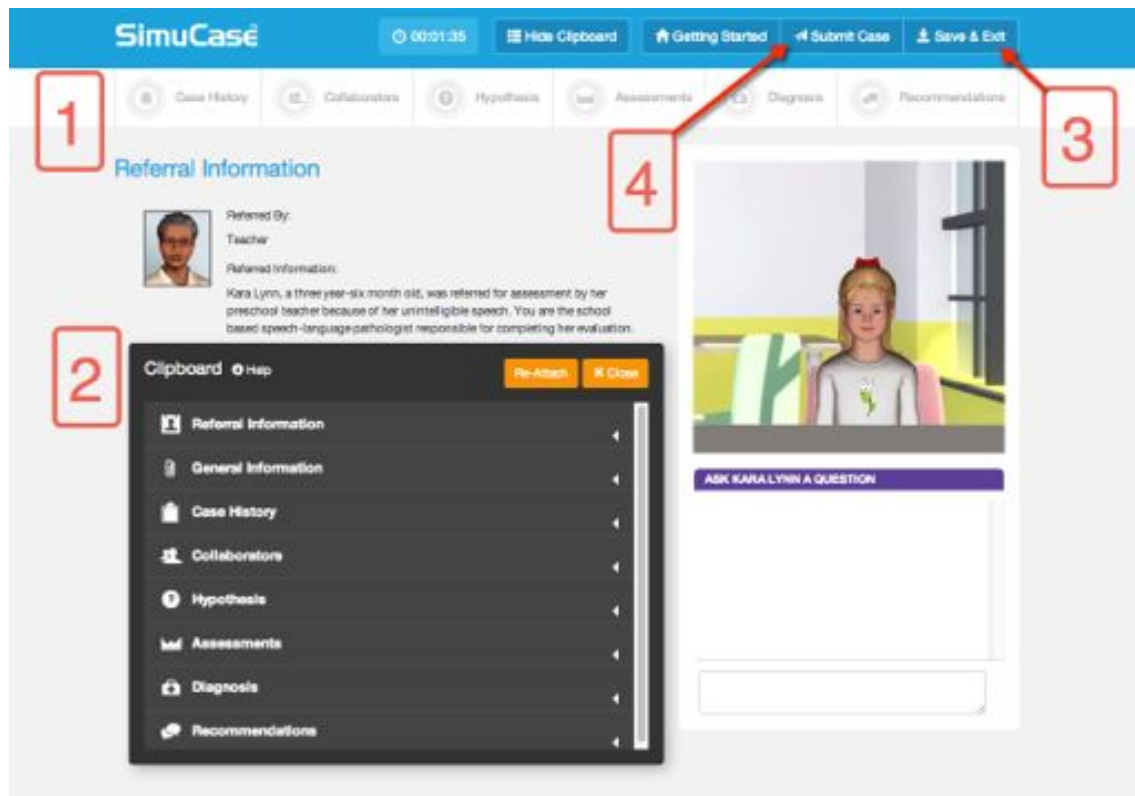
All rights reserved except where permission to reprint is indicated.

SimuCase™ was developed in partnership with the Ohio Department of Education-OMNIE Program. This product or portions thereof was manufactured under license from Case Western Reserve University – US Patent Pending.

SimuCase™ Quick Guide	4
What Is SimuCase™?	5
An Integrated Curriculum: Using SimuCase in the Classroom	5
SimuCase with an Entire Class	7
SimuCase with a Small Group	7
Individual Use	7
SimuCase Case Categories	8
Learning Mode and Assessment Mode	8
Working, Saving and Submitting a Case	11
SimuCase™ Technical Requirements	14
SimuCase Frequently Asked Questions	16
Screening Cases	18
The SimuCase Screening Tools	18
How Does SimuCase Screening Case Scoring Work?	26
Assessment Cases	29
The SimuCase Assessment Tools	30
How Does SimuCase Assessment Case Scoring Work?	39
Intervention Cases	42
The SimuCase Intervention Tools	42
How Does SimuCase Intervention Case Scoring Work?	50
References	53



Quick Guide



SimuCase™ Quick Guide

Assess your virtual client using these tools:

1. Work through the **assessment process** in the core areas, in any order. But we recommend starting here:
 - a. **Case History** – interact with the virtual client or caregiver by selecting appropriate questions or asking your own
 - b. **Collaborators** – consult other professionals and family members, ask novel questions and review reports
 - c. **Clinical Hypothesis** – record your hypothesis and action plan
 - d. **Assessments** – administer age-appropriate standardized and non-standardized tests and procedures
 - e. **Diagnosis** – select your diagnoses
 - f. **Recommendations** – write client specific recommendations

You are scored based on the appropriateness of your decisions.

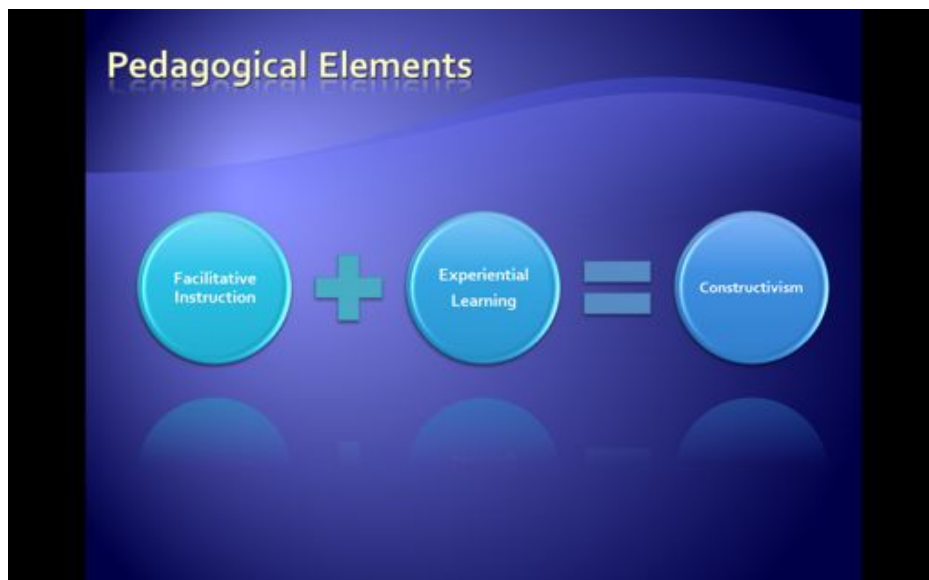
2. The **clipboard** saves all of your decisions for review.
3. **Save/Exit** your case to resume at a later time.
4. **Submit** your case upon completion and print your final report.

What Is SimuCase™?

SimuCase is a web-based simulated case study application designed to support best practice in speech-language pathology. It provides numerous cases in multiple settings. This learning tool encourages the user to measure and improve clinical decision-making in the area of assessment. Users might be university students, practicing speech-language pathologists, speech-language pathology assistants, or those who want more experience in with a specific type of case. The user practices screening, assessment, or intervention methods while interacting with virtual clients, family members, and professionals referred to as collaborators. By asking the right questions, collaborating with appropriate professionals, using proper tools, and interpreting data, the user can make a diagnosis, write recommendations, and send a report. Virtual simulations allow practice in a safe, nonthreatening environment and are intended to build knowledge, skill, and professional judgment—qualities that contribute to successful, competent clinicians.

An Integrated Curriculum: Using SimuCase in the Classroom

Simulations are powerful tools for learning with an untapped potential for formal education use in the field of speech-language pathology (Akilli & Cagiltay, 2006). When these simulations are blended with faculty instruction, research has shown significantly higher achievement results compared to students provided with traditional instruction (McGaghie, Siddall, Mazmanian, & Myers, 2009; Rieber, Boyce, & Assad, 1990). Thus, if SimuCase is structured as part of the curriculum, and feedback is provided via faculty and supervisors, it can enable learners to understand and transfer concepts more effectively than with a traditional curriculum alone. This facilitative instruction, combined with the experiential learning opportunities that SimuCase provides, creates a successful constructivist approach to teaching and learning.



Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. They should not be afraid to start over when mistakes are noted and they should not fear starting over often.

Williams and Jansen (2009, 2010) have shown that university students who completed a case multiple times or restarted a case when mistakes were made scored significantly higher compared to students who only completed a case one or two times ($r = .60$, $n = 16$, $p = .01$). Furthermore, students who spent several days working on a case using concentrated “thought time” after completing an online simulation scored significantly higher when compared to students who completed a simulation in one sitting ($r = .52$, $n = 16$, $p = .05$).

SimuCase can be used as a discussion tool with an entire class, used as a study tool for small groups of students, or can be used by individual users. In each of these learning environments, learners benefit from faculty support and feedback.

SimuCase with an Entire Class

SimuCase can be used in a large classroom setting simply by displaying SimuCase via an LCD projector and discussing the case as a class. This use allows students to work together and ask questions regarding the assessment process. This is an effective way to orient students to the SimuCase process, set expectations for learning and discuss all the topics and issues pertaining to a case. While this set up is ideal for group discussion and collaboration, it limits the amount of individual contribution to the assessment process.

SimuCase with a Small Group

SimuCase can also be used by small groups of students. Groups of two to three students can be assigned to work on a case and share their results within the classroom setting. In this way, students learn to work together and to share their individual experiences and ideas about a case. While students have additional support from their classroom peers, they are still challenged to work through a case and share their outcomes with other learners. Student groups can compete for “high scores” and share their successes and challenges. Faculty needs to be aware that when forming student groups, students with practicum experience may influence overall group performance.

Individual Use

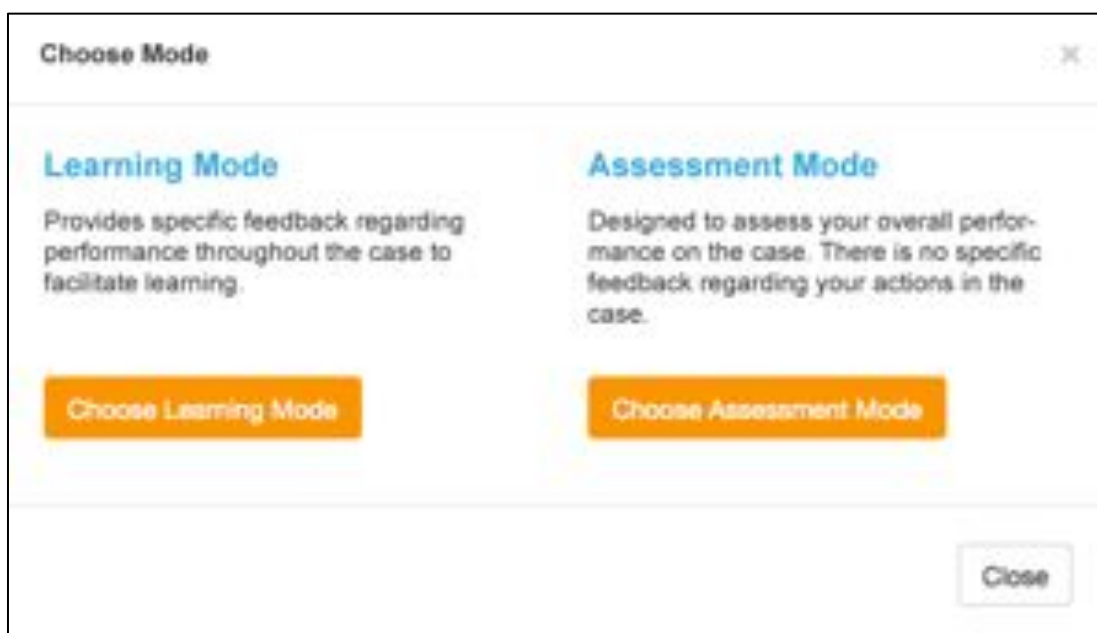
SimuCase was primarily created for individual student use. Cases can be utilized to provide practice with new concepts, as well as provide remediation for learners struggling with specific ideas or skills. Students are encouraged to work through a simulated case multiple times. This application was created to allow the user to start and stop the assessment process as needed. A student can resume any case study or restart a case as needed. The Export Final Report function allows students to share their work with faculty and supervisors as they complete the assessment process.

SimuCase Case Categories

There are three categories of SimuCase experiences: screening, assessment and intervention cases. **Screening** cases are designed to improve the skill sets necessary for completion of a screen. These cases contain screenings for the user to practice the elements that contribute to a comprehensive screening protocol. **Assessment** cases encourage the student to exercise the clinical decision-making skills required for a full client assessment. The student is expected to interact with family and other professionals to gather information pertinent to the case, as well as administer assessments to make a diagnosis and provide recommendations. Assessment cases are available in both learning and assessment mode (see below). Finally, **Intervention** cases are designed to provide learners the opportunity to improve interventions skills; each case includes intervention activities that allow for practice of treatment methods.

Learning Mode and Assessment Mode

There are two simulation modes that a student must select from when beginning an assessment case: learning mode and assessment mode. The mode selection is available **only** for assessment cases.



Learning mode is designed to provide the user with specific, real-time feedback relative to clinical decision-making throughout the simulation. The intent of learning mode is to provide the student with a formative learning experience. Performance meters are found in the main menu of the game, and these meters fill and empty based on the actions of the user. The goal is to fill the meter completely for each section. As the meter fills, the color will transition from yellow to green, indicating mastery within the section.

The screenshot displays the SimuCase interface. At the top, a blue header contains the SimuCase logo, a timer at 00:27:04, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with icons for 'Case History', 'Collaborators', 'Hypothesis', 'Assessments', 'Diagnosis', and 'Recommendations'. The 'Case History' section is active, showing a table of client information for Kara Lynn. The 'Speech and Language' section is highlighted in purple. To the right, there is a 3D avatar of Kara Lynn and an 'ASK A QUESTION' section with a text input field.

Background Information	Client Name: Kara Lynn
Prenatal-Birth	Speech and Language
Medical	At what age did Kara Lynn begin crawling?
Developmental	At what age did Kara Lynn begin babbling?
Speech and Language	At what age did Kara Lynn begin saying words?
Social and Behavioral	At what age did Kara Lynn begin using two word phrases?
Educational	At what age did Kara Lynn begin using sentences?
	How well does Kara Lynn follow directions and conversation with others?
	Do you feel that Kara Lynn can verbally express herself easily?
	Does Kara Lynn ever hesitate, get stuck, or repeat sounds or words?
	Does Kara Lynn's voice sound hoarse, harsh, or nasal?

ASK A QUESTION

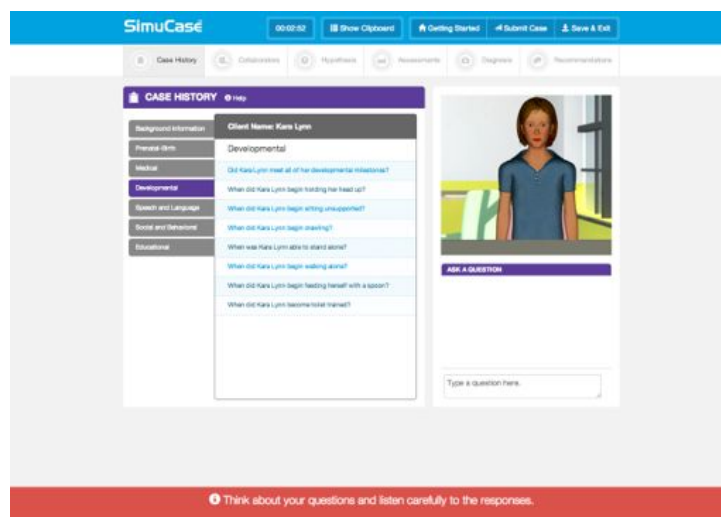
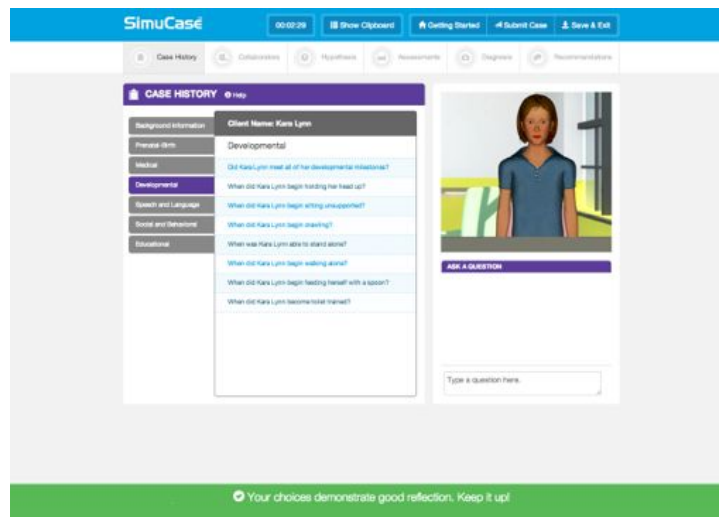
She is very smart and follows directions very well.

Do you feel that Kara Lynn can verbally express herself easily?

She has a lot she wants to say but has a difficult time saying specific sounds in words which makes it harder for her to express herself.

Type a question here.

Feedback messages also occur as the student progresses through the game. When a series of good decisions are made, a positive feedback message appears at the base of the game window. When poor decisions are made, a redirect feedback message appears in the same manner. The number of redirect feedback messages received by the student within each section is saved in both the clipboard and the final report.



Assessment mode is designed to assess the overall performance of a student in a summative manner. There is no specific, real-time feedback provided to the learner. The performance meters remain grayed out and no feedback messages are presented to the student.

Working, Saving and Submitting a Case

For each of the three case types, there are key functions that are similar as students work through a case: the clipboard, saving/exiting a case, and submitting a case.

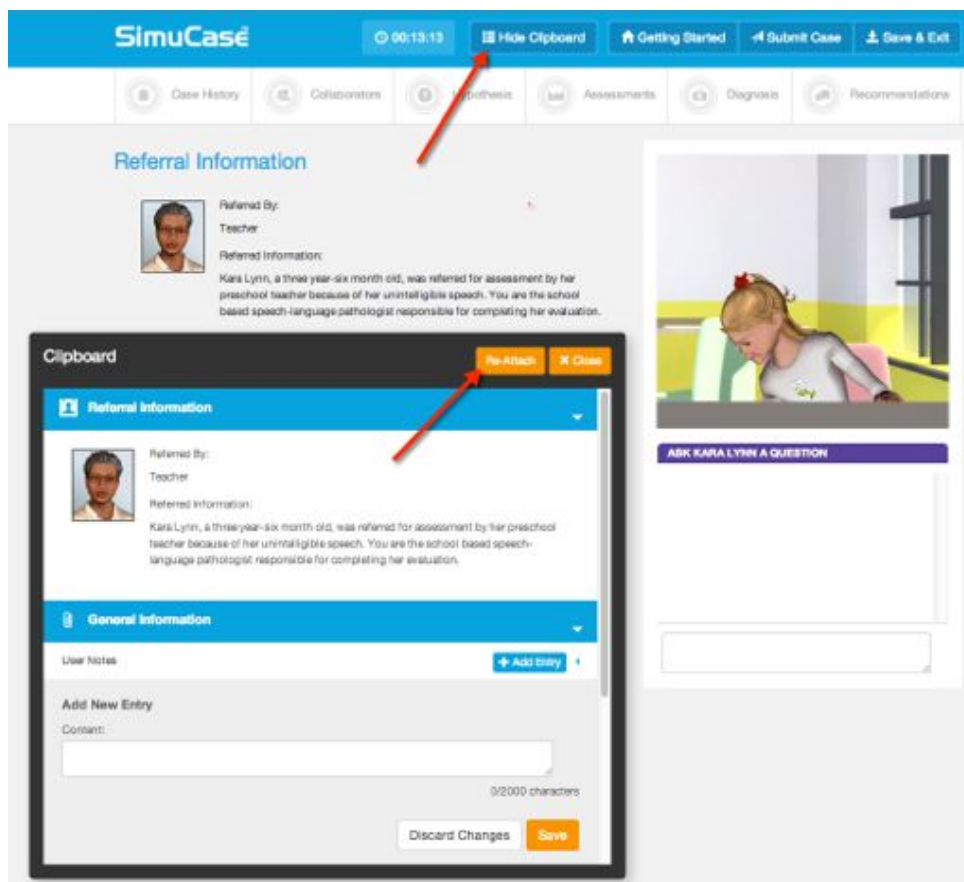
Using the Clipboard

The **Clipboard** is a dynamic, interactive tool that allows recording of data throughout a simulation. This is a feature designed to help organize user data; use of the clipboard is not scored. Decisions made throughout the case are added automatically from each of the tools. Additional notes can be entered by clicking the **Add Entry** button. Users can also delete notes in the Clipboard.

The screenshot displays the 'Clipboard' interface. At the top right, there are 'Re-Attach' and 'Close' buttons. The main content area shows a profile picture of a man, followed by 'Referred By: Teacher' and 'Referred Information: Kara Lynn, a three-year-six month old, was referred for assessment by her preschool teacher because of her unintelligible speech. You are the school based speech-language pathologist responsible for completing her evaluation.' Below this is a blue header for 'General Information'. Underneath, there is a 'User Notes' section with an '+ Add Entry' button, which is highlighted by a red arrow. Below the 'Add Entry' button is a text input field labeled 'Add New Entry' with a 'Content:' label. At the bottom right of the input field, it says '0/2000 characters'. At the very bottom, there are 'Discard Changes' and 'Save' buttons.

The Clipboard offers the option for users to enter General Information. This is an optional feature that allows users to record behavioral objectives such as conditions, student behavior and performance criteria. The user can add, edit, or delete text in the general information section at any time prior to submitting the case. All notes in the Clipboard are included in the final report so decisions made during the case can be reviewed once the case is submitted. As a reminder, use of the Clipboard is not scored.

The clipboard can be hidden using the **Show/Hide Clipboard** button in the main navigation, as well as attached and re-attached to the main header of the game with the **Attach/Re-Attach** button. The clipboard is easily moved by clicking and dragging, and can also be re-sized by clicking and dragging the edges of the floating window.



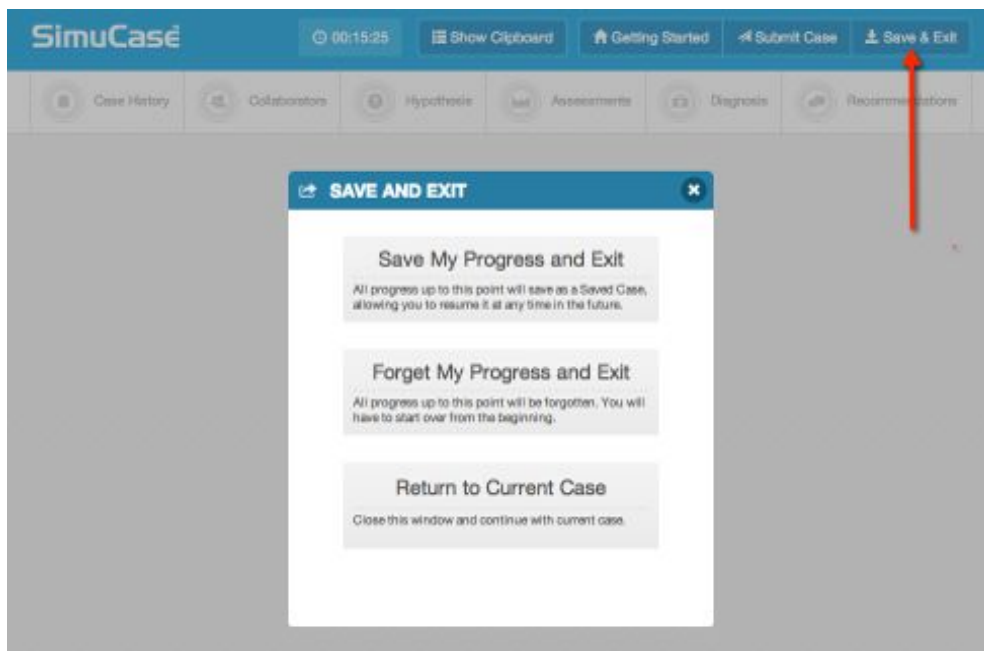
Save/Exit

SimuCase has an auto-save function so the user does not need to worry about saving data while working within a case. To exit the program, select **Save/Exit**, and then choose from the following options:

Save My Progress and Exit—this feature allows the user to save all work with the case and to exit the program. Saved cases are listed in a user’s pending course page.

Forget My Progress and Exit—this feature allows the user to exit and restart a case.

Return to Current Case—this feature allows the user to go back into the current case.

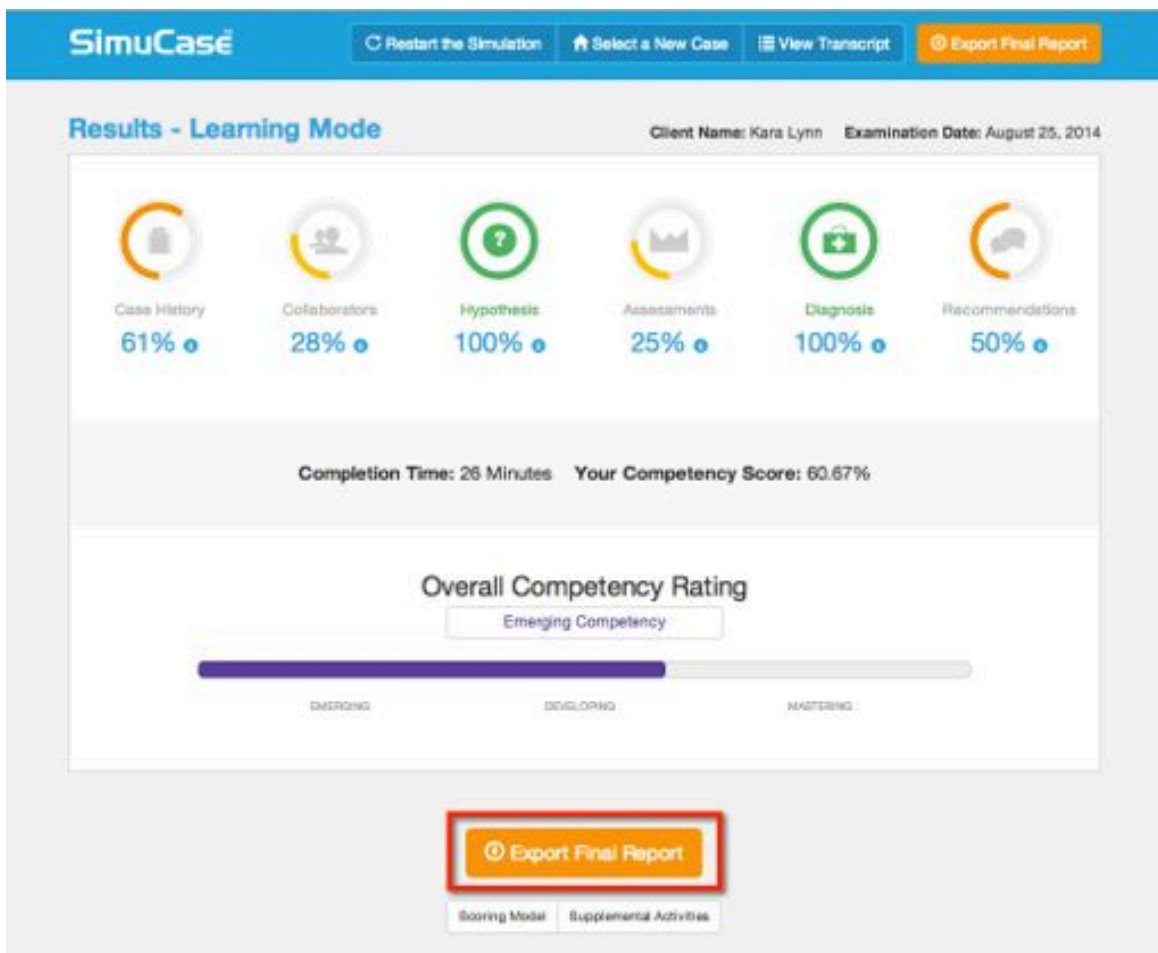


Submitting the Case

A simulation is not complete until the user chooses **Submit Case**—the final step in the simulation process. When clicking Submit Case, results regarding the user’s competencies in each of the areas of decision making associated with the case type are provided.

In addition, the amount of time spent in the case is indicated, although is not a part of competency scoring. The time indicated is an estimate and includes the time it might have taken to complete a screening or assessment activity. Although time spent on a case is not considered in the competency scoring, the issue of time spent on a case is a good point of discussion for any of the cases included in SimuCase.

The user can view a printed report of his or her competencies and all clinical decisions he or she made throughout a case by **Exporting Final Report**. This final report is a PDF summarizing all actions taken within the simulation. The user’s competency scores are also listed. Completed cases are saved on a user’s Completed Case Transcript.



SimuCase™ Technical Requirements

SimuCase is cloud-based application with minimal technical requirements: a web browser and a high-speed Internet connection. For optimal performance we recommend the following:

Supported Internet Browsers: Safari version 5.0 or higher, Firefox version 6.0 or higher, Internet Explorer 9.0 or higher, Chrome version 14.0 or higher

To insure compatibility, users can select the **Browser Test** found on the SimuCase drop down menu to test the required browser settings

The screenshot shows the SpeechPathology.com website. At the top, there is a navigation bar with links for Home, About Us, Contact Us, Help, Sign In, and Sign Up. Below this is a secondary navigation bar with links for Continuing Education, Career Center, Student Union, Clinical Resources, SimuCase™, and Newsletters. The SimuCase™ link is highlighted, and a dropdown menu is visible with options: Start a Case, Saved Cases, Completed Cases, and Browser Test. A red arrow points to the Browser Test option. Below the navigation is a main content area with a sign-out message and a large promotional banner for CEUs. The banner features a woman's face and text: "A Better Way to Earn CEUs and Find Jobs", "Earn as many SLP CEUs as you want for only \$99 a year. We offer hundreds of online SLP CEU courses. All courses are offered for ASHA CEUs. Making it simple and convenient for you. It's that easy.", and buttons for "Browse Courses", "Learn More", and "Video Tour". To the right of the banner is a smaller image of the same woman with text: "Earn As Many CEUs As You Want. Only \$99 per year!". At the bottom of the page, there are icons for CEU Courses, Career Center, Clinical Resources, and Student Union.

To verify the ability of your system to playback media (i.e. audio and video files) within the SimuCase application, the Browser Test page also includes automatic playback of a video file. You should see and hear the virtual patient introduction.

SimuCase Browser Test

- Browser Supports HTML5 Video
- Browser Supports HTML5 Audio
- Browser Supports Javascript

A video player window showing a virtual patient, a young girl with brown hair, wearing a purple and white polka-dot shirt, sitting at a desk. The video player has a progress bar at the bottom showing 0:00.

Your browser successfully meets the requirements to view SimuCase™ Virtual Case Studies.

You should also see and hear a video playing in the media window. If not, please call 800-242-5183 for assistance.

Browse our virtual case studies to get started

[SimuCase™ Virtual Case Studies](#)

SimuCase is a mobile compatible application. Supported devices include Apple and Android products, such as iPad and Motorola Xoom.

Additional recommendations for optimal performance of SimuCase include:

- JavaScript must be enabled
- Adobe Acrobat Reader (free from get.adobe.com/reader/)
- Headphones are optional but highly recommended

We are here to help you! If additional technical support is needed, please contact SpeechPathology.com customer service at 1-800-242-5183 between the hours of 7 AM and 7 PM ET. You may also contact our support team via email at help@simucase.com

SimuCase Frequently Asked Questions

Where Does the Case Content Come From?

SimuCase content has been provided by families from a variety of hospitals, schools, and clinics across the United States, including Cincinnati Children's Hospital Medical Center (CCHMC), the Cleveland Hearing and Speech Center, and numerous university clinics. Each case was created from an actual case submitted by a practicing speech-language pathologist.

Once a case is created, at least two reviewers with expertise in the disorder area review the case content to insure evidence-based practices. Each reviewer evaluates scoring information and provides approval prior to release of a case.

How Long Should It Take a User to Complete a Case?

Understanding that SimuCase is a simulated case study experience for the speech-language assessment process, it should take users several hours to successfully complete a case. Since this experience is similar to the diagnostic process, users should expect to spend approximately 1-3 hours working through the diagnostic process.

Can a case be completed more than once?

YES! One of the greatest advantages of simulation is the opportunity for repeated practice. Learners should be encouraged to start over when dissatisfied with decisions or scoring.

Can students work on more than one case at a time?

YES! Each case is stored and scored independently within the SpeechPathology.com user account.

How does scoring work?

Scoring is based on the strength of the decisions students make within each section of a case. In general, students earn points for good, **reflective** decisions and lost points for poor decisions (**rejected** decisions). There are also decisions that are judged as **acceptable**, which results in no points awarded or subtracted. The points earned in each section are added together to determine the overall competency level of the student. The following scale is utilized to assign a competency measure:

- 90% or higher overall score = Mastering
- 70-89% overall score = Developing
- Lower than 70% overall score = Emerging

Are there any supplemental activities available?

YES! SimuCase assessment cases also include Supplemental Activities for use. These activities give you the option to:

- Create a Comprehensive Diagnostic Report—to develop your writing and reporting skills
- Create an Individualized Educational Program (IEP)—based on forms provided by the Ohio Department of Education
- Create an Evaluation Team Report (ETR)—based on forms provided by the Ohio Department of Education
- Create a Lesson Plan
- Create an Intervention Plan based on the assessment results, areas of concerns, and recommendations of the case

Click **Supplemental Activities** on the Results page to access these activities. All forms are provided in PDF format and can be downloaded to a local drive for printing and use.

Screening Cases

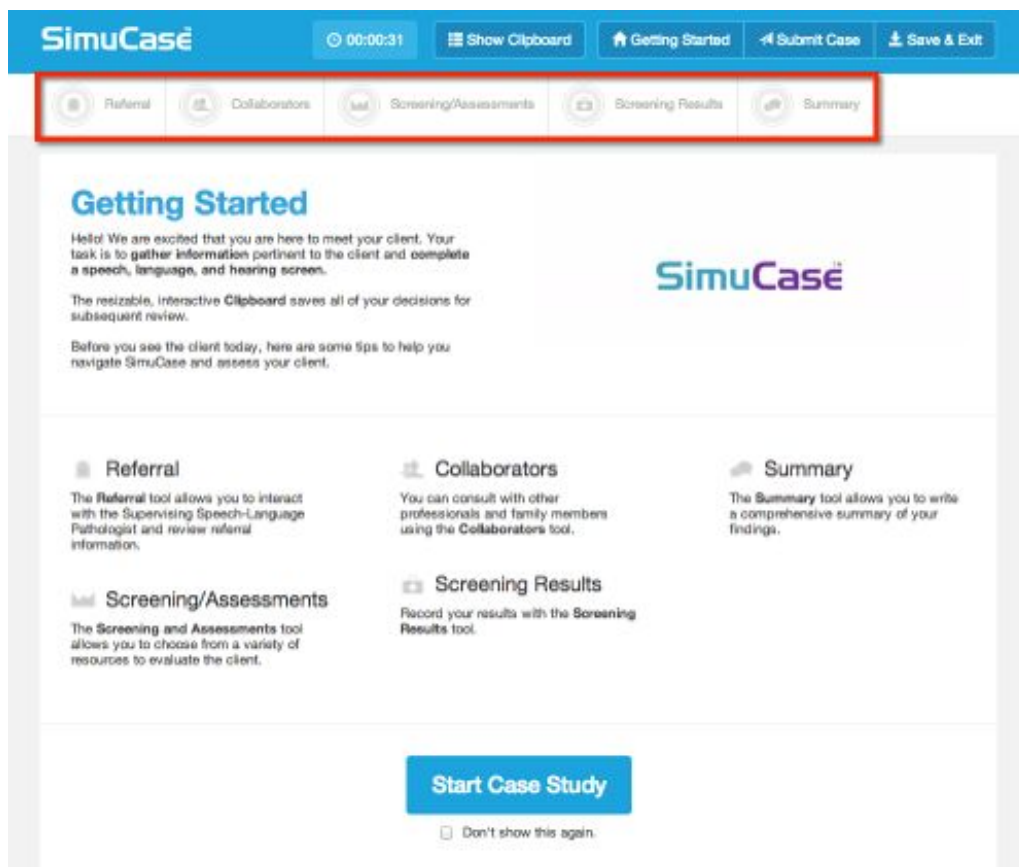
Screening cases are designed to improve the skill sets necessary for completion of a screen. These cases contain screenings for the user to practice the elements that contribute to a comprehensive screening protocol. Please note that screening cases are only available in assessment mode.

The following cases in the library are considered screening cases:

- Ben – speech, language and hearing screen – age 5

The SimuCase Screening Tools

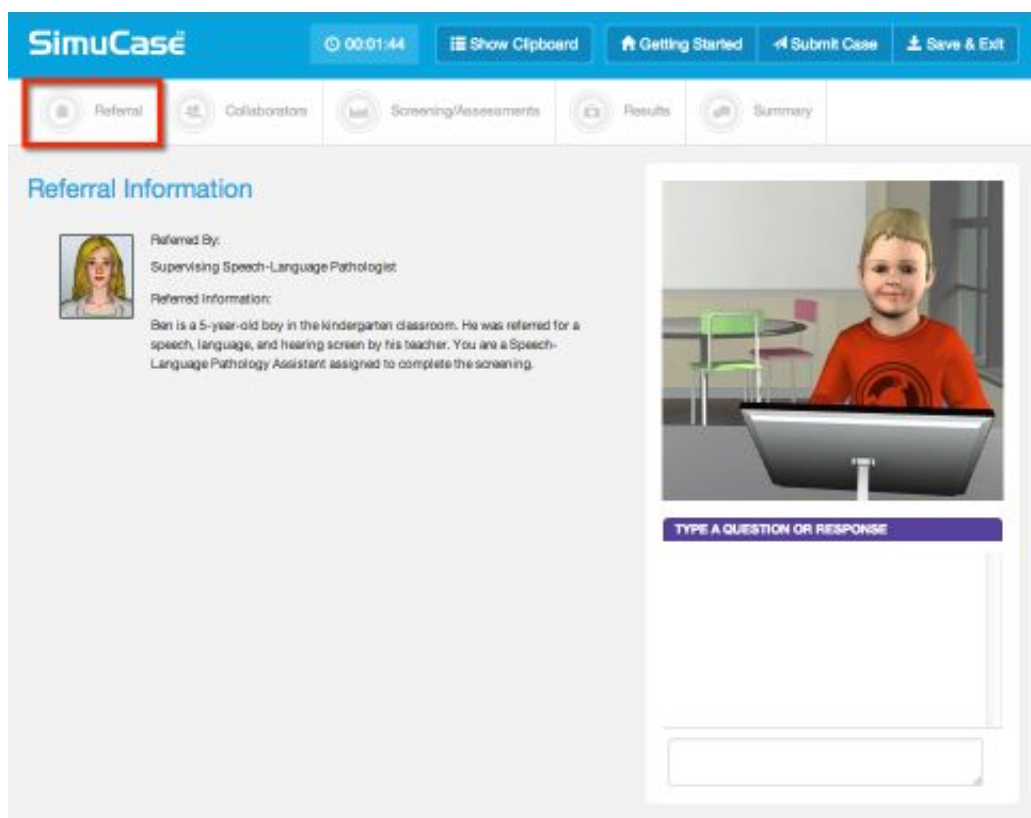
The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Referral, Collaborators, Screening/Assessments, Screening Results, Summary, Save/Exit, and Submit Case are easy to access via the toolbar. The dynamic clipboard, an additional tool, helps



users organize the information they gather about the case. When first opening a case, the Clipboard must be opened and can be resized, as well as closed as needed. The following sections walk you through the purpose and function of each of the menus in the toolbar.

Referral

The **Referral** tool allows the user to interact with the supervising speech-language pathologist to find out more information pertaining to the case. The user may select questions or type questions in the Ask Questions box. These responses can be viewed and printed at any time. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop.



The screenshot displays the SimuCase software interface. At the top, a blue header bar contains the SimuCase logo, a timer showing 00:01:44, and several navigation buttons: Show Clipboard, Getting Started, Submit Case, and Save & Exit. Below the header is a horizontal menu with five tabs: Referral, Collaborators, Screening/Assessments, Results, and Summary. The Referral tab is highlighted with a red rectangular box. The main content area is titled "Referral Information" and features a small profile picture of a woman on the left. To the right of the picture, the text reads: "Referred By: Supervising Speech-Language Pathologist" and "Referred Information: Ben is a 5-year-old boy in the kindergarten classroom. He was referred for a speech, language, and hearing screen by his teacher. You are a Speech-Language Pathology Assistant assigned to complete the screening." On the right side of the interface, there is a video player showing a young boy in a red shirt sitting at a desk with a computer monitor. Below the video player is a purple button labeled "TYPE A QUESTION OR RESPONSE" and a large white text input area.

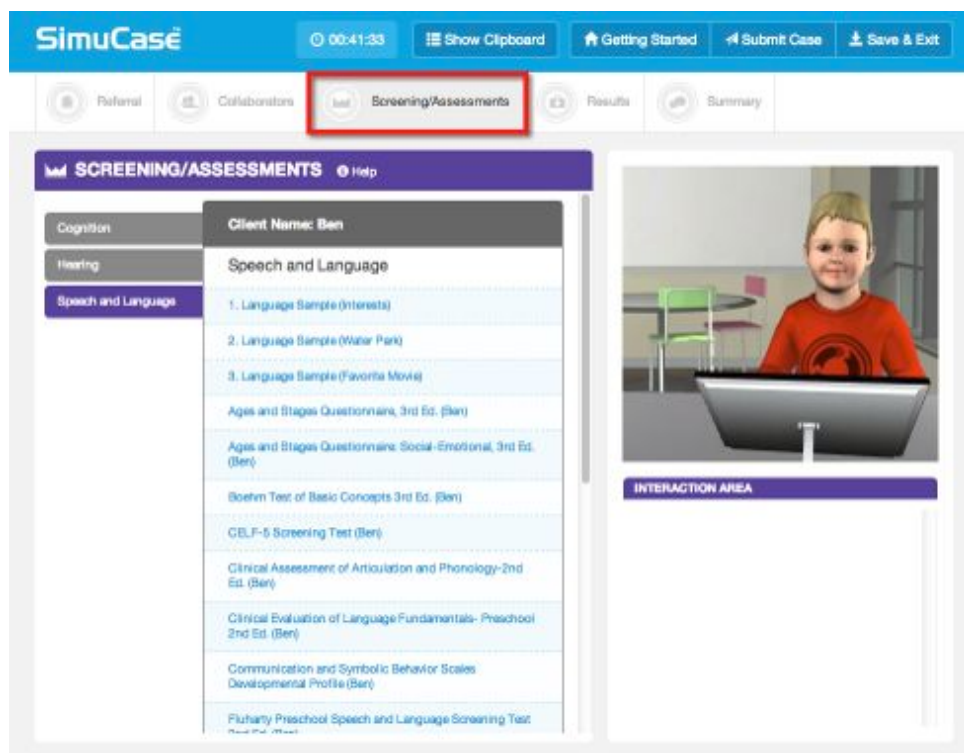
Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened. For these custom cases, users must collaborate with the supervising speech-language pathologist to both gain and share information regarding the case.

The screenshot shows the SimuCase interface. At the top, there is a blue header with the SimuCase logo, a timer at 00:08:25, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with icons for 'Referral', 'Collaborators', 'Screening/Assessments', 'Results', and 'Summary'. The 'Collaborators' tab is highlighted with a red box. The main content area is titled 'COLLABORATORS' and features a 'Help' icon. It is divided into two columns. The left column lists categories: 'Allied Professions' (Occupational Therapist), 'Family' (Mother), 'Educational' (Kindergarten Teacher, School Secretary, Special Education Teacher), and 'Medical'. The right column is titled 'SELECT A COLLABORATOR TO ASK A QUESTION' and contains 'Instructions' for using the tool. At the bottom right, a red box labeled 'Type questions here' is connected to the main content area by a red arrow.

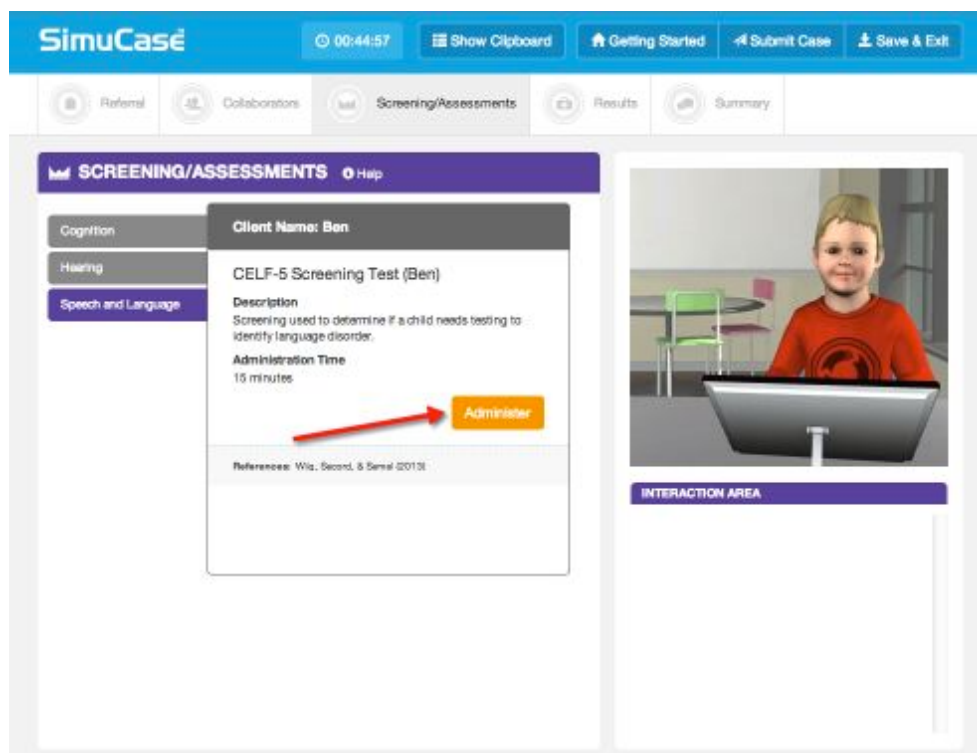
Screening/Assessments

The **Screening/Assessments** tool allows the user to choose from a variety of screening and assessment measures. Users can print a PDF of all available assessment measures. Printing this PDF allows the user to plan ahead for an efficient session (much like what is required in the real world).



For all screening/assessment tools, users are expected to know the age range and appropriateness of an approach and activity; an inappropriate choice (e.g., due to age range) will result in negative points and affect the user's overall competency rating.

Screening/Assessment tools are available in a number of formats. Computer-driven assessments are those that the computer automatically provides results. Users simply select the component they wish to utilize. When clicking **Administer**, a summary of the results of the assessment appears in the Interaction box. More detailed results of the screening or assessment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the screenings or assessments at any time by clicking **Add Entry**.



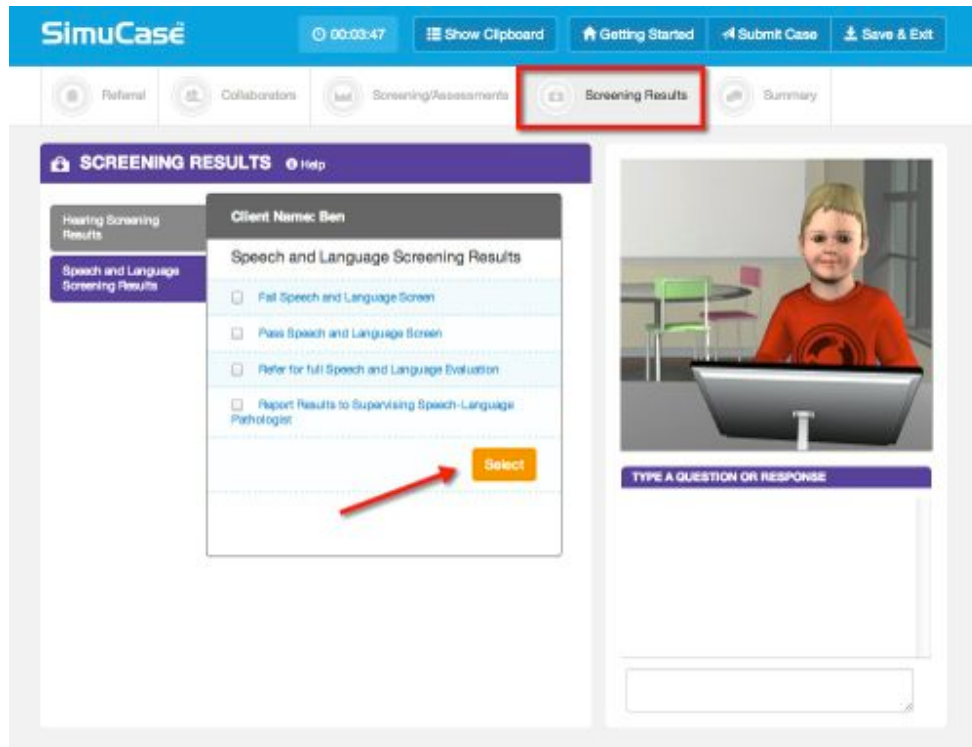
User-driven screenings/assessments are those that the user controls and all selections are interactive. The user observes, scores, and reports the response accuracy of the client. In some cases, the user-driven treatment is a graded assessment. Graded assessments are interactive and require the user to answer questions that are graded for accuracy. The number of questions tied to each response is variable and the user must answer all questions to advance through the graded assessment. Graded assessments results are NOT included in the clipboard, but will be reported on the results page and the final exported report at the completion of the case.

The screenshot shows the SimuCase interface. At the top, there is a blue header with the SimuCase logo, a timer at 00:50:07, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with tabs for 'Referral', 'Collaborators', 'Screening/Assessments', 'Results', and 'Summary'. The main content area is split into two panels. The left panel, titled 'SimuCase Language Screen for Preschoolers', contains a question: '(Response) Which picture shows...? The cat sits while the woman pets it.' Below the question are four image options. The top-left image is highlighted with a yellow border. To the right of the images is a 'Scoring' section with two radio buttons: '2 points: Points to picture in upper left corner' (selected) and '0 points: Points to incorrect picture'. Below the images is a 'Play Response' button. At the bottom of the panel are 'Back' and 'Next' buttons, and the text 'Slide 6 of 67'. The right panel shows a 3D avatar of a young child with blonde hair wearing a red shirt, sitting at a desk with a computer monitor. Below the avatar is a purple bar labeled 'INTERACTION AREA' and a white box containing a link: 'Assessment Form: SimuCase Language Screen for Preschoolers Form'.

When clicking **Administer**, user-driven screenings/assessments play a video so the user can practice conducting the screening/assessment, scoring, and reporting. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Once the user completes an analysis, the data or results obtained may be entered into the clipboard. All screenings/assessments may be re-administered at any time, however, this extra time and effort affects the user's overall time.

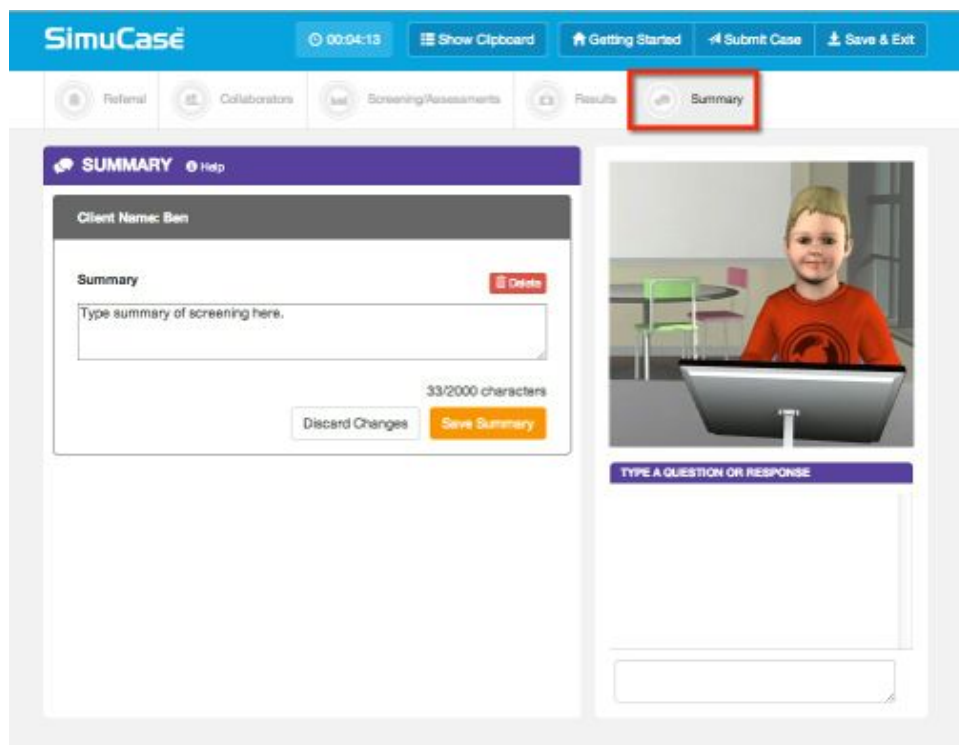
Screening Results

The **Screening Results** tool allows the user to indicate outcome of the screening. After making selections, the user clicks **Select**.



Summary

In addition to reporting screening results, the **Summary** tool allows the user to write a short narrative regarding the client's screening outcome. These details should include the results and if further evaluation is warranted. Scoring is based on the use of relevant key words included in the narrative. After keying in the summary, the user clicks **Save Summary**. The summary can be edited at any time until the case is submitted.



The screenshot displays the SimuCase software interface. At the top, a blue header bar contains the SimuCase logo, a timer at 00:04:13, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation menu with icons for 'Referral', 'Collaborators', 'Screening/Assessments', 'Results', and 'Summary'. The 'Summary' tab is highlighted with a red box. The main content area is titled 'SUMMARY' and includes a 'Help' icon. It shows 'Client Name: Ben' and a 'Summary' section with a text input field containing the placeholder 'Type summary of screening here.' and a 'Delete' button. A character count '33/2000 characters' is displayed below the input field. At the bottom of the summary section are 'Discard Changes' and 'Save Summary' buttons. To the right, there is a video player showing a young boy in a red shirt sitting at a desk with a computer monitor. Below the video player is a text input field with the prompt 'TYPE A QUESTION OR RESPONSE'.

How Does SimuCase Screening Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. As they work through the case, if many mistakes are made, students are encouraged to begin again. They should not be worried about restarting a case for learning purposes.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

Referral

Questions are rated based on strength of decision-making skills when gathering referral information. Users must be selective in the questions chosen. If questions are repeated or are redundant, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points.

Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users should keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

Screening/Assessments

Points are awarded for administering appropriate screening/assessments. Each case has numerous possibilities for outcomes but it is the combination of screening/assessments that is scored.

In screening/assessments, users are deducted points for:

- Selecting inappropriate screening or assessment activity based on the case information
- Selecting an unnecessary screening or assessment activity
- Selecting an age-inappropriate screening or assessment activity
- Selecting two or more screening or assessment activities that measure the same outcome

Screening Results

Points are awarded for selecting the appropriate outcome for speech, language, and hearing screen. Points are deducted for each inappropriate selection.

Summary

Points are awarded for providing general statements regarding the outcome of the screening. Scoring is based on key word matching so users can keep their summary statements concise and phrase-like and address outcome and if further evaluation is warranted. However, as an instructor you can require a more formal summary and it will not affect scoring as long as a key word is entered.

Areas Not Scored

As mentioned previously, the final competency score and rating are calculated based solely on the decisions of the user. Use of the Clipboard is **not** scored. This is an optional feature that assists users with the treatment process. Graded assessment results are reported separately on the results page and within the final exported report, but are **not** included in the calculation of the final competency score or competency rating. The time it takes to complete a case is measured but is also **not** scored. The timer indicates total simulation play time. This can be defined as the time spent in the simulation, which helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to complete specific treatment activities is included in the time spent in the simulation.

The SimuCase Competency Rating

A user's overall competency in screening a particular client is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Referral
- Collaborators
- Screenings/Assessments
- Screening Results
- Summary

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

Assessment Cases

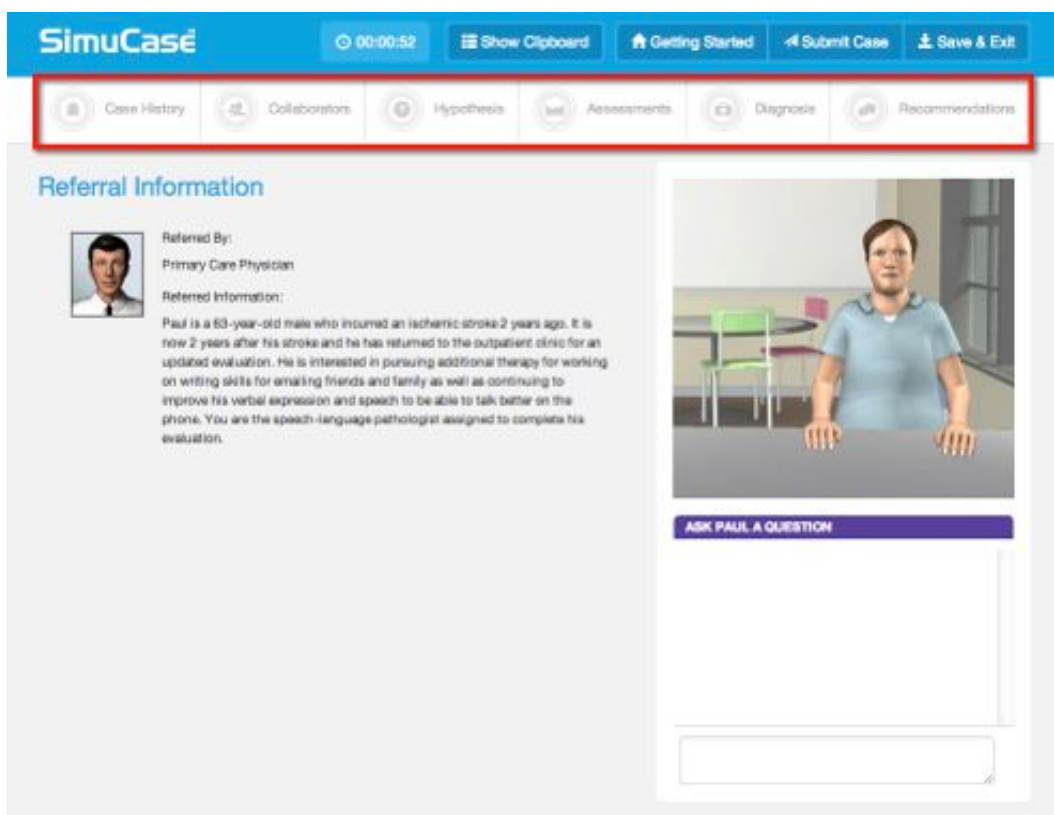
Assessment cases encourage the student to exercise the clinical decision-making skills required for a full client assessment. The student is expected to interact with family and other professionals to gather information pertinent to the case, as well as administer assessments to make a diagnosis and provide recommendations. Assessment cases are available in both learning and assessment modes. Please direct your students to utilize the most appropriate mode based on your learning objectives, learning activities and assessment methods.

The following cases in the library are considered assessment cases:

- Kara Lynn—Phonology—Age 3:6
- Latreece—Language and Literacy—Age 8
- Doug—Traumatic Brain Injury—Age 14
- Molly—Fluency—Age 11
- Carley—Language and Fluency—Age 3
- Colt—Voice—Age 12
- Oliver—Cognitive Disability/Dysphagia/AAC—Age 3
- Deon—Social and Emotional—Age 10
- Dora—Spanish Language Disorder—Age 3
- Felix—Bilingual Language Disorder—Age 7
- Paul— Broca’s Aphasia—Age 63
- Amy – Spasmodic Dysphonia – Age 36

The SimuCase Assessment Tools

The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Case History, Collaborators, Clinical Hypothesis, Assessments, Diagnosis, Recommendations, Save/Exit, and Submit Case are easy to access via the toolbar. The dynamic clipboard, an additional tool, helps users organize the information they gather about the case. When first opening a case, the Clipboard must be opened and can be resized, as well as closed as needed. The following sections walk you through the purpose and function of each of the menus in the toolbar.



The screenshot displays the SimuCase application interface. At the top, a blue header bar contains the SimuCase logo, a timer showing 00:00:52, and several navigation buttons: Show Clipboard, Getting Started, Submit Case, and Save & Exit. Below the header, a red-bordered toolbar contains six icons representing Case History, Collaborators, Hypothesis, Assessments, Diagnosis, and Recommendations. The main content area is titled "Referral Information" and features a small profile picture of a man. To the right of the profile picture, the text reads: "Referred By: Primary Care Physician" and "Referred Information: Paul is a 63-year-old male who incurred an ischemic stroke 2 years ago. It is now 2 years after his stroke and he has returned to the outpatient clinic for an updated evaluation. He is interested in pursuing additional therapy for working on writing skills for emailing friends and family as well as continuing to improve his verbal expression and speech to be able to talk better on the phone. You are the speech-language pathologist assigned to complete his evaluation." To the right of the text is a 3D avatar of a man sitting at a table. Below the avatar is a purple button labeled "ASK PAUL A QUESTION" and a large text input area.

Case History

The **Case History** tool allows the user to interact with a virtual client or caregiver (e.g., a parent). By choosing a category of questions and then directly selecting questions within the category, the virtual client or caregiver responds. When a caregiver provides Case History responses, users can ask follow-up or probing questions by typing the question into the **Ask Parent a Question** box. As questions are asked, responses are placed in the user's Clipboard as though the user is taking notes. These responses can be viewed and printed at any time.

The screenshot displays the SimuCase interface. At the top, the 'Case History' tab is selected and highlighted with a red box. The main content area is divided into two sections. On the left, a table lists various questions under different categories. On the right, there is a 3D virtual avatar of a man and an 'ASK A QUESTION' section with a text input field.

Category	Question
Background Information	Client Name: Paul
Education and Vocation	Background Information
Medical	Why are you here today?
Speech and Language	Tell me the story of your stroke.
Social and Behavioral	How long ago was your stroke?
	What previous therapy have you had?
	What type of therapy have you had?
	What difficulties have you had since your stroke?
	How would you rate the severity of your problem, mild, moderate, or severe?
	What progress have you made?

Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened.

The screenshot displays the SimuCase interface. At the top, the 'Collaborators' tab is highlighted with a red box. The main area is divided into two sections: 'COLLABORATORS' and 'Clipboard'.

COLLABORATORS (highlighted with a red box):

- Medical:**
 - Dental Professional
 - Primary Care Physician (highlighted with a blue box)
 - Podiatrist
 - Adult Care Registered Nurse
- Family:**
 - Wife
- Educational:**
 - Elementary School Teacher
- Allied Professions:**

ASK PRIMARY CARE PHYSICIAN A QUESTION:

You wish to collaborate with [Primary Care Physician]. If desired, type a question in the open text field and hit enter. Questions and responses will be saved in the clipboard. Enter any additional notes via 'Add Entry' in the clipboard. View reports (if applicable) in the clipboard.

You approach the Primary Care Physician.

Primary Care Physician: Hello, I am Dr. Rudy. Paul has been a patient of mine for years. I recently saw him for his yearly physical and he mentioned he was interested in pursuing additional therapy. I have a copy of his radiology report from the time of his stroke which I will send to your clipboard. Thank you for evaluating him.

This collaborator has sent you additional information. Please check your clipboard.

Type a question here (indicated by a red arrow pointing to the input field).

Clipboard:

Clipboard (highlighted with a black box):

- Clipboard content: "speech evaluation. He is interested in pursuing additional therapy for working on writing skills for emailing friends and family as well as continuing to improve his verbal expression and speech to be able to talk better on the phone. You are the speech-language pathologist assigned to complete his evaluation."
- General Information
- Case History
- Collaborators (highlighted with a blue box):
 - User notes (Add Entry)
 - Primary Care Physician
 - 01:28:01 PM You approach the Primary Care Physician.
 - 01:28:01 PM Hello, I am Dr. Rudy. Paul has been a patient of mine for years. I recently saw him for his yearly physical and he mentioned he was interested in pursuing additional therapy. I have a copy of his radiology report from the time of his stroke which I will send to your clipboard. Thank you for evaluating him.
 - 01:28:02 PM File Attachment: Paul Radiology Report.pdf (highlighted with a red box)

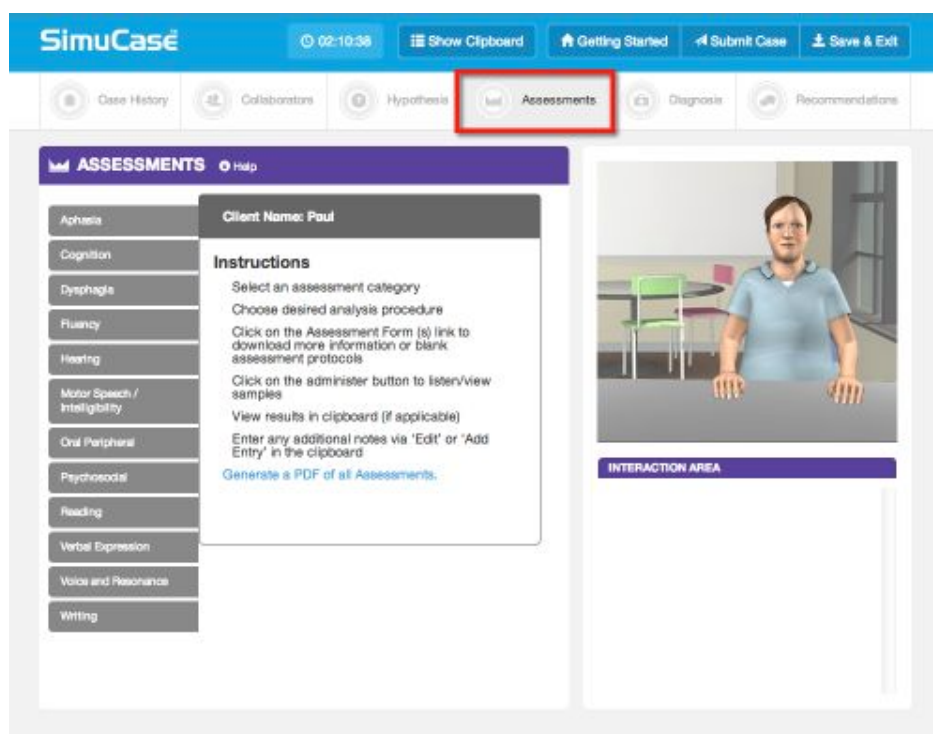
Clinical Hypothesis

The clinical hypothesis tool allows the learner to record a clinical theory and plan regarding the client's presentation of behaviors. The purpose of the clinical hypothesis is to guide clinical decision-making throughout the simulation. The student must type in both the hypothesis and the action plan in the designated text fields. Once the student clicks the **Save** button, the data is then stored in the clipboard for later review. The clinical hypothesis is not graded, but is instead marked as complete or incomplete in the final report.

The screenshot displays the SimuCase interface for the Clinical Hypothesis tool. At the top, a blue header bar contains the SimuCase logo, a timer showing 02:07:06, and navigation buttons for Show Clipboard, Getting Started, Submit Case, and Save & Exit. Below the header, a navigation menu includes buttons for Case History, Collaborators, Hypothesis (highlighted with a red box), Assessments, Diagnosis, and Recommendations. The main content area is titled "CLINICAL HYPOTHESIS" and includes a "Help" link. It shows the Client Name as Paul and a "Hypothesis #1" section with a "Delete" button. There are two text input fields: "Type your hypothesis here." and "Action Plan: [Type your action plan here.]" Below these fields is a link to "Add Another Hypothesis". At the bottom of the form, there are two buttons: "Discard Changes" and "Save Hypothesis", with a red arrow pointing to the "Save Hypothesis" button. To the right of the form is a 3D avatar of a male patient in a light blue shirt standing behind a counter. Below the avatar is an "ASK A QUESTION" section with a text input field.

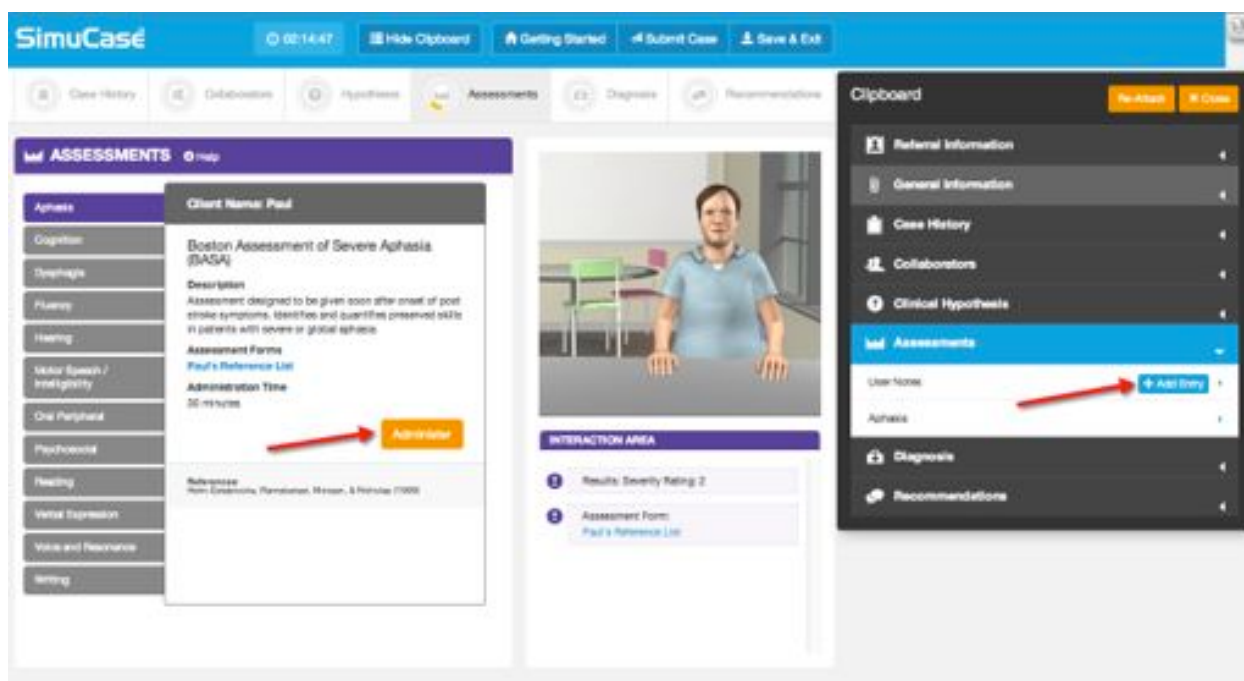
Assessments

The **Assessments** tool allows the user to choose from a variety of resources—including both standardized tests and non-standardized tests and procedures—with which to evaluate the client. The assessment options are categorized by the domain or area of assessment (e.g., Articulation and Phonology, Fluency, Classroom Performance) and by subcategories within those areas. Users can print a PDF of all available assessment options categorized by domain and subcategories. Printing this PDF allows the user to plan ahead for an efficient assessment (much like what is required in the real world).



For all assessment tools, a brief description of the test or procedure is given as well as the reference/source. Users are expected to know the age range and appropriateness of an assessment tool; an inappropriate choice (e.g., due to age range, area of assessment) will result in negative points and affect the user's overall competency rating. A link to the Reference List is provided so users can refer to the original source for more information, including how to conduct a procedure and/or how to interpret results.

Administration of assessments is either computer driven or user driven. Computer-driven assessments are those that the computer automatically provides results. Users simply select the component they wish to assess, then the test or subtest they wish to administer. When clicking **Administer**, a summary of the results of the assessment appears in the Interaction box. More detailed results of the assessment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the assessments at any time by clicking **Add Entry**.



User-driven assessments are those that the user controls. The user observes, scores, analyzes, and interprets results. Examples of user-driven assessments include procedures to analyze a speech sample, a language sample, a play session, an interview, or an oral mechanism exam.

The user-driven assessments include blank forms to download and use when conducting the procedure and analysis. When clicking **Administer**, many user-driven assessments have a video file play so the user can practice conducting the procedure, the scoring, and the analysis. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Other user-driven assessment tools do not provide a video or audio file for analysis. Rather a checklist, written language sample, etc. is downloaded to the Clipboard for analysis. Once the

user completes an analysis, the data or results obtained can be entered into the clipboard. All assessments may be re-administered at any time, however, this extra time and effort affects the user's overall time.

The screenshot displays the SimuCase software interface. At the top, a blue navigation bar contains the SimuCase logo, a timer at 02:18:15, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below this is a secondary navigation bar with icons for 'Case History', 'Collaborators', 'Hypothesis', 'Assessments' (highlighted), 'Diagnosis', and 'Recommendations'.

The main interface is divided into two primary sections. On the left, under the 'ASSESSMENTS' header, is a vertical sidebar with various assessment categories: Aphasia, Cognition, Dysphagia, Fluency, Hearing, Motor Speech / Intelligibility, Oral Peripherals, Psychosocial, Reading, Verbal Expression, **Discourse Tasks** (highlighted in purple), Naming, Voice and Resonance, and Writing. The main content area to the right of the sidebar shows details for a client named Paul. It includes a 'Picture Description' section with a description of a painting and a URL, an 'Assessment Forms' section with a link to 'Paul's Reference List', and an 'Administration Time' section indicating 'Self-paced'. A 'Re-Administer' button is located at the bottom right of this section.

On the right side of the interface, there is a video player showing a 3D-rendered character of a man. A red box highlights the 'Audio and Video Controls' at the bottom of the video player, which includes play, stop, and volume icons. Below the video player is an 'INTERACTION AREA' with a list of instructions: 'Results: inappropriate for client referral.', 'Assessment Form: Paul's Reference List', 'Enter notes in the clipboard after viewing Paul's response.', and 'Assessment Form: Paul's Reference List'.

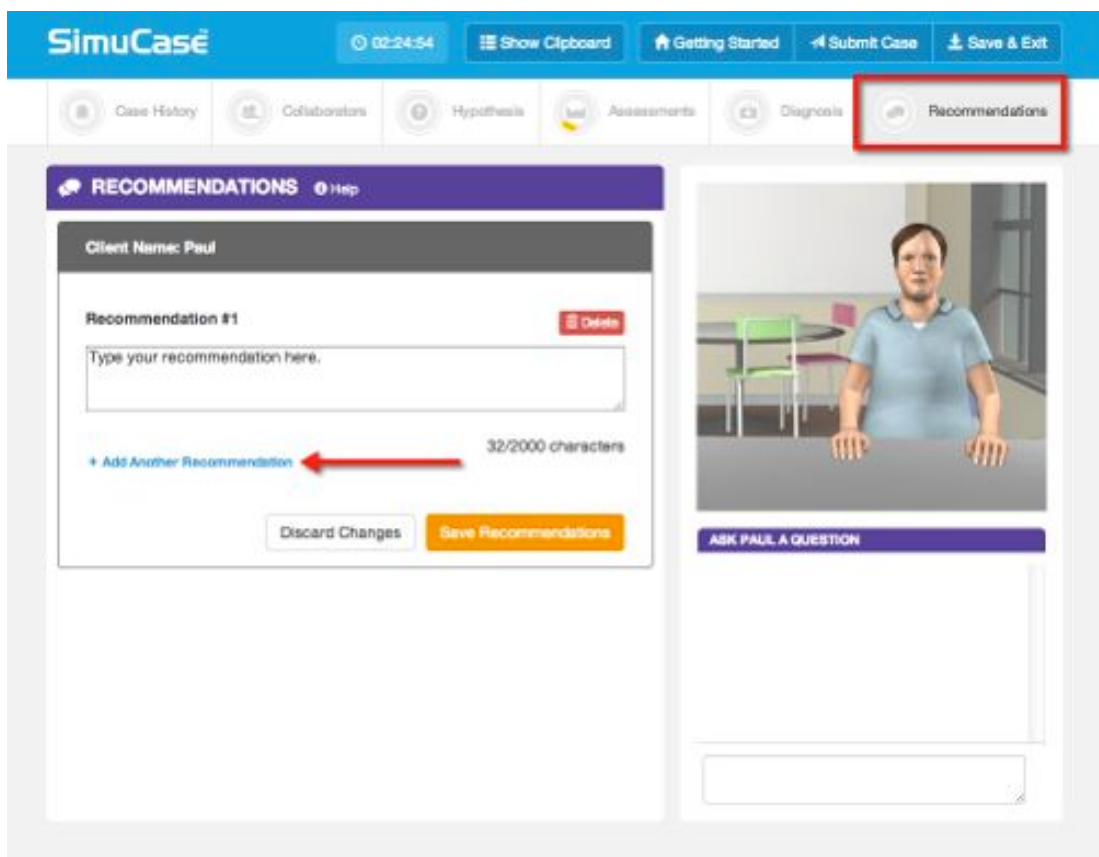
Diagnosis

The **Diagnosis** tool allows the user to indicate a diagnosis. Categories and subcategories of diagnoses are provided as choices. Cases may have multiple diagnoses so users need to be thorough in their choices. Cases may also have no area of concern. Once choosing the categories/subcategories of diagnoses or indicating no concern, the user clicks **Select**.

The screenshot shows the SimuCase interface. At the top, there is a blue header with the SimuCase logo, a timer at 02:22:53, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with icons for 'Case History', 'Collaborators', 'Hypothesis', 'Assessments', 'Diagnosis' (highlighted with a red box), and 'Recommendations'. The main content area is titled 'DIAGNOSIS' and includes a 'Help' link. On the left, a vertical list of categories is shown, with 'Language' selected. The right side of the interface displays 'Client Name: Paul' and a list of subcategories under 'Language': 'Expressive Language', 'Receptive Language', 'Second Language Acquisition', and 'Written Language Disorder', each with an unchecked checkbox. A 'Select' button is located at the bottom right of this list. To the right of the list is a 3D avatar of a man named Paul in a light blue shirt, standing behind a table. Below the avatar is a purple bar that says 'ASK PAUL A QUESTION' and a text input field.

Recommendations

In addition to making a diagnosis, the **Recommendations** tool allows the user to write specific recommendations for the client. If intervention is required, that recommendation must be made as well as specific recommendations for remediation. Select **Add Another Recommendation** to add more than one recommendation per case. Once keying in all recommendations, the user clicks **Save Recommendations**. Recommendations can be added or deleted at any time until the case is submitted.



How Does SimuCase Assessment Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. They should not be afraid to start over when mistakes are noted and they should not fear starting over often.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

Case History

Questions are rated based on strength of decision-making skills. Users must be selective in the questions chosen. If questions are repeated or are redundant when a question was already asked, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points. Follow-up questions that gain additional information may be awarded additional points. Scoring for follow-up questions is based key words in the question. Each case has additional follow-up questions that will gain points toward the competency score and the key words will trigger a response from the interviewee.

Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users can keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

Assessments

Points are awarded for administering appropriate standardized or non-standardized assessments. Each case has numerous possibilities for assessments but it is the combination of assessments that is scored.

In assessments, users are deducted points for:

- Selecting inappropriate assessments based on the information and topic area (e.g., a stuttering assessment for a language case)
- Selecting an unnecessary assessment
- Selecting an age-inappropriate assessment (e.g., selecting the *Clinical Evaluation of Language Functions-Preschool* for an adolescent student)
- Selecting two or more assessments that measure the same outcome (CAAP-2 and the HAPP-3)

Diagnosis

Points are awarded for identifying areas of concern for a given case. Each case study can contain one or several areas of concern or diagnoses. Each of these areas needs to be selected based on assessment results in order to show competency. Points are deducted for each inappropriate diagnosis identified. Note that the outcome of a case can also have no area of concern.

Recommendations

Points are awarded for providing general recommendations for each case. Scoring is based on key word matching so users can keep their recommendations concise and phrase-like (e.g., qualify for services, hearing re- evaluation, monitor speech development, phonological awareness). However, as an instructor you can require more formal recommendations and it will not affect scoring as long as a key word is entered.

Areas Not Scored

Use of the Clipboard is **not** scored. This is an optional feature that assists users with the assessment process. The time it takes to complete a case is measured but is also not scored. The timer indicates total simulation play time. This can be defined as the time spent in the

simulation, which helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to administer specific tests and procedures is included in the time spent in the simulation. The clinical hypothesis is not scored; it is marked as complete or incomplete in the final report.

The SimuCase Competency Rating

A user's overall competency in assessing a particular case is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Case History
- Collaborators
- Clinical Hypothesis
- Assessments
- Diagnosis
- Recommendations

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

Scoring Model

On the Results page, click **Scoring Model** to review an example of the breakdown of the skills for each case. Competencies are based on the American Speech-Language-Hearing Association's (2009) Knowledge and Skills Acquisition (KASA) standards. Each case has customized KASA competencies to track user performance.

Intervention Cases

Intervention cases are designed to provide learners the opportunity to improve intervention skills; each case includes intervention activities that allow for practice of treatment methods.

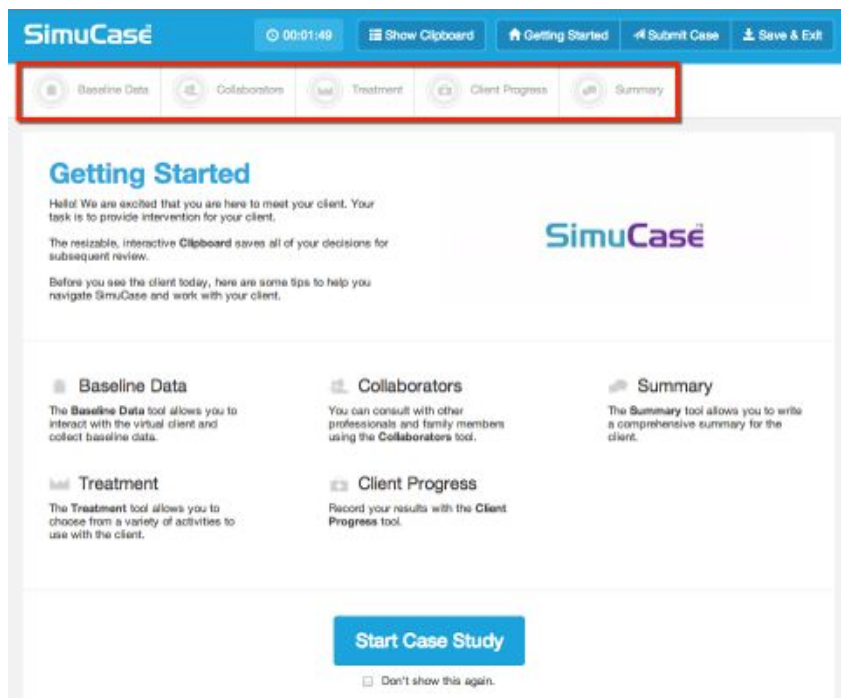
Please note the intervention cases are only available in assessment mode.

The following cases in the library are considered intervention cases:

- Anna – Articulation – age 3:3

The SimuCase Intervention Tools

The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Baseline Data, Collaborators, Treatment, Client Progress, Summary, Save/Exit, and Submit Case are easy to access via the toolbar. The dynamic clipboard, an additional tool, helps users organize the information they gather about the case. When first opening a case, the Clipboard must be opened and can be resized, as well as closed as needed. The following sections walk you through the purpose and function of each of the menus in the toolbar.



Baseline Data

The **Baseline Data** tool allows the user to interact with the virtual client. By choosing a category of questions (i.e. language samples) and then directly selecting questions within the category, the virtual client responds. The user may also type questions in the Ask Questions box. These responses can be viewed and printed at any time. All videos allow the user to adjust the volume, play at full screen, replay, pause, or stop.

The screenshot displays the SimuCase software interface. At the top, the 'SimuCase' logo is on the left, followed by a timer showing '00:05:10' and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below this is a navigation bar with 'Baseline Data' (highlighted with a red box), 'Collaborators', 'Treatment', 'Client Progress', and 'Summary'. The main content area is titled 'BASELINE DATA' and features a table with 'Language Samples' and 'Objectives' columns. The 'Language Samples' column lists ten questions. To the right of the table is a video player showing a virtual girl with red hair and a purple polka-dot shirt sitting at a table. Below the video is a text input field labeled 'TYPE A QUESTION OR RESPONSE' and a smaller input field at the bottom with the placeholder text 'Type a question or response here.'

Language Samples	Client Name: Anna
Objectives	Language Samples
	What is your favorite movie?
	What is your favorite song?
	What is your favorite book?
	Do you have another favorite book?
	What is your favorite television show?
	What is your favorite toy?
	What is your favorite food to eat?
	Tell me about your family.
	What did you do this weekend?
	How was swimming?

Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened. For these custom cases, users must collaborate with the supervising speech-language pathologist to both gain and share information regarding the case.

The screenshot displays the SimuCase software interface. At the top, a blue navigation bar contains the SimuCase logo, a timer at 00:07:09, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below this, a secondary navigation bar features icons for 'Baseline Data', 'Collaborators' (highlighted with a red box), 'Treatment', 'Client Progress', and 'Summary'. The main content area is titled 'COLLABORATORS' and is divided into three sections: 'Educational' (featuring a 'Preschool Teacher' profile), 'Allied Professions' (featuring profiles for 'Occupational Therapist', 'Physical Therapist', 'Supervising Speech-Language Pathologist', and 'Music Therapist'), and 'Family' (featuring 'Anna's Mother'). To the right, a panel titled 'SELECT A COLLABORATOR TO ASK A QUESTION' contains an 'Instructions' box with the following text: 'Click on an individual team member you wish to collaborate with', 'If desired, type a question in the open text field and hit enter', 'Questions and responses will be saved in the clipboard', 'Enter any additional notes via 'Add Entry' in the clipboard', and 'View reports (if applicable) in the clipboard'. At the bottom of this panel, a text input field is labeled 'Type questions here.' with a red arrow pointing to it.

Treatments

The **Treatment** tool allows the user to choose from a variety of treatment activities which to evaluate the client. The treatment approach options are categorized by type of activity and each activity includes a variety of intervention techniques. Users can print a PDF of all available treatment options categorized by activity and approaches. Printing this PDF allows the user to plan ahead for an efficient treatment session (much like what is required in the real world).

The screenshot displays the SimuCase software interface. At the top, there is a blue header bar with the SimuCase logo, a timer showing 00:08:51, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header, a navigation bar contains icons for 'Baseline Data', 'Collaborators', 'Treatment' (highlighted with a red box), 'Client Progress', and 'Summary'. The main content area is titled 'TREATMENT' and features a list of activity options on the left and a client information panel on the right. The client information panel shows 'Client Name: Anna' and lists three treatment approaches: 'Cycles Approach Week 3 Targeting /b/ sound', 'Language Treatment for Phonological Disorders Targeting Pre-nouns', and 'Sensory-Motor Approach /v/ Isolation'. On the right side, there is a 3D avatar of a young girl with brown hair, wearing a purple polka-dot shirt, sitting at a table. Below the avatar is a purple bar labeled 'INTERACTION AREA'.

For all treatment tools, users are expected to know the age range and appropriateness of an approach and activity; an inappropriate choice (e.g., due to age range) will result in negative points and affect the user's overall competency rating. Treatment tools are available in a number of formats. Computer-driven treatments are those that the computer automatically provides results. Users simply select the component they wish to utilize. When clicking **Administer**, a summary of the results of the treatment appears in the Interaction box. More

detailed results of the treatment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the treatments at any time by clicking **Add Entry**.

The screenshot shows the SimuCase software interface. At the top, there is a blue header with the SimuCase logo, a clock showing 00:12:49, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with tabs for 'Baseline Data', 'Collaborators', 'Treatment', 'Client Progress', and 'Summary'. The 'Treatment' tab is selected.

The main content area is titled 'TREATMENT' and is divided into two columns. The left column contains a list of treatment options: 'Book', 'Cards', 'Crutches and Ladders TM', 'Fisher-Price Little People Animal Sounds Farm TM', 'Hangman', 'Oral Motor Kit', and 'Tablet App'. The 'Fisher-Price Little People Animal Sounds Farm TM' option is highlighted in purple.

The right column displays the details for the selected treatment. It includes the client name 'Anna', the title 'Language Treatment for Phonological Disorders Targeting Pronouns', and two descriptions. The first description states: 'While playing with barn, Anna imitates phrases containing pronoun usage and target sounds.' The second description states: 'An approach to the treatment of phonological disorders in children who also demonstrate a language disorder. Focus of treatment is language with the intent to also facilitate improvement in phonological targets.' Below the descriptions are sections for 'Assessment Forms' (with a link to 'Anna Case Reference List'), 'Administration Time' (Self-paced), and 'References'. A red arrow points to an orange 'Administer' button.

On the right side of the interface, there is a video player showing a 3D avatar of a young girl with brown hair, wearing a purple polka-dot shirt, sitting at a table. Below the video player is a purple bar labeled 'INTERACTION AREA'.

The screenshot displays the SimuCase software interface. At the top, there is a blue header with the SimuCase logo, a timer showing 00:15:27, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below the header is a navigation bar with tabs for 'Baseline Data', 'Collaborators', 'Treatment' (which is selected), 'Client Progress', and 'Summary'. The main content area is split into two panels. The left panel shows a slide titled 'bird' with a 'Play Response' button and a list of options to 'Select sounds in error': 'no errors', 'initial b', and 'final d'. The right panel features a 3D character of a young girl sitting at a table, with an 'INTERACTION AREA' below her. This area contains three notification boxes: 'Results: Inappropriate for client referral.', 'Assessment Form: Anna Case Reference List', and another 'Assessment Form: Anna Case Reference List'.

User-driven treatments are those that the user controls and all selections are interactive. The user observes, scores, and reports the response accuracy of the client. In some cases, the user-driven treatment is a graded assessment. Graded assessments require the user to answer questions for each response. The number of questions tied to each response is variable and the user must answer all questions to advance through the graded assessment. Graded assessments results are NOT included in the clipboard, but will be reported on the results page and the final exported report at the completion of the case.

When clicking **Administer**, user-driven treatments play a video so the user can practice conducting the technique, the scoring, and the reporting. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Once the user completes an analysis,

the data or results obtained may be entered into the clipboard. All treatments may be re-administered at any time, however, this extra time and effort affects the user's overall time.

Client Progress

The **Client Progress** tool allows the user to indicate the accuracy for completed treatment activities. The user is expected to indicate the appropriate level of accuracy, take home activities, and indicate if the objectives were or were not met for the sessions. After making selections, the user clicks **Select**.

The screenshot displays the SimuCase interface for the 'Client Progress' section. At the top, the SimuCase logo is on the left, and a timer (00:22:44) and navigation buttons (Show Clipboard, Getting Started, Submit Case, Save & Exit) are on the right. Below this is a navigation bar with icons for Baseline Data, Collaborators, Treatment, Client Progress (highlighted with a red box), and Summary.

The main content area is titled 'CLIENT PROGRESS' and shows 'Client Name: Anna'. On the left, a list of activities is displayed, with 'Take-Home Activity' and 'Objective' highlighted by red boxes. The main area shows a list of accuracy options for '/m/ Initial Position Word Level', ranging from 10% to 100% accuracy, and a 'Not Targeted' option. A 'Select' button is at the bottom right. On the right side, there is a video feed of a child and a text input field labeled 'TYPE A QUESTION OR RESPONSE'.

Summary

In addition to reporting client progress, the **Summary** tool allows the user to write specific details regarding the client's session. These details should include the objectives met, accuracy relative to the achievable level of progress and follow-up steps to report to the supervising speech-language pathologist. Scoring is based on the use of relevant key words included in the narrative. After keying in the summary, the user clicks **Save Summary**. The summary can be edited at any time until the case is submitted.

The screenshot displays the SimuCase software interface. At the top, a blue navigation bar contains the SimuCase logo, a timer showing 00:27:38, and buttons for 'Show Clipboard', 'Getting Started', 'Submit Case', and 'Save & Exit'. Below this is a secondary navigation bar with icons for 'Baseline Data', 'Collaborators', 'Treatment', 'Client Progress', and 'Summary'. The 'Summary' tab is highlighted with a red rectangular box. The main content area is divided into two panels. The left panel, titled 'SUMMARY', shows 'Client Name: Anna' and a 'Summary' section with a text input field containing the placeholder text 'This is where the user enters the summary narrative.' and a 'Delete' button. Below the input field is a character count '54/2000 characters' and two buttons: 'Discard Changes' and 'Save Summary'. The right panel features a 3D avatar of a young girl with brown hair, wearing a purple polka-dot shirt, sitting at a desk. Below the avatar is a purple header 'TYPE A QUESTION OR RESPONSE' and a large text input area with the placeholder text 'Type questions here.'

How Does SimuCase Intervention Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. As they work through the case, if many mistakes are made, students are encouraged to begin again. They should not be worried about restarting a case for learning purposes.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

Baseline Information

Questions are rated based on strength of decision-making skills when gathering language samples. Users must be selective in the questions chosen. If questions are repeated or are redundant, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points.

Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users should keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

Treatments

Points are awarded for administering appropriate treatment activities. Each case has numerous possibilities for treatments but it is the combination of activities that is scored.

In treatments, users are deducted points for:

- Selecting inappropriate treatment activity based on the case information

- Selecting an unnecessary treatment activity
- Selecting an age-inappropriate treatment activity
- Selecting two or more treatment activities that measure the same outcome

Client Progress

Points are awarded for identifying the accuracy for an appropriate level of targeting the sound(s) in question for a given client, appropriate take home activities and the correct status of objectives. Points are deducted for each inappropriate selection.

Summary

Points are awarded for providing general statements regarding the progress of the client for each case. Scoring is based on key word matching so users can keep their summary statements concise and phrase-like and address met objectives, accuracy and follow-up steps. However, as an instructor you can require a more formal summary and it will not affect scoring as long as a key word is entered.

Areas Not Scored

As mentioned previously, the final competency score and rating are calculated based solely on the decisions of the user. Use of the Clipboard is **not** scored. This is an optional feature that assists users with the treatment process. Graded assessment results are reported separately on the results page and within the final exported report, but are **not** included in the calculation of the final competency score or competency rating. The time it takes to complete a case is measured but is also **not** scored. The timer indicates total simulation play-time. This can be defined as the time spent in the simulation that helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to complete specific treatment activities is included in the time spent in the simulation.

The SimuCase Competency Rating

A user's overall competency in treating a particular client is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Baseline Information
- Collaborators
- Treatments
- Client Progress
- Summary

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

References

- Akilli, G.K., & Cagiltay, K. (2006). An instructional design/development model for game-like learning environments: The FIDGE model. In M. Pivec (Ed.), *Affective and emotional aspects of human-computer interaction game-based and innovative learning approaches* (Vol. 1, pp. 93-112). Amsterdam, The Netherlands: IOS Press.
- American Speech-Language-Hearing Association. (2009). *Knowledge and skills acquisition (KASA) summary form for certification in speech-language pathology*. Retrieved from www.asha.org
- McGaghie, W.C., Siddall, V.J., Mazmanian, P.E., & Myers, J. (2009). Simulation in undergraduate and graduate medical education: Implications for CME. *Chest*, 135(3 Suppl.), 62S-68S.
- Rieber, L.P., Boyce, M., & Assad, C. (1990). The effects of computer animation on adult learning and retrieval tasks. *Journal of Computer-Based Instruction*, 17(2), 46-50.
- Williams, S., & Jansen, L. (2009, November). *Introduction to Simu-Case™*. Presentation at the annual convention of the American Speech-Language-Hearing Association, New Orleans, LA.
- Williams, S., & Jansen, L. (2010, April). *SimuCase™: Interactive case studies for student assessment*. Presentation at the annual conference of the Council of Academic Programs in Communication Sciences and Disorders, Austin, TX.
- Williams, S., Lewis, B., & Buchner, M. (2006). *Creation and implementation of an interactive immersive virtual reality simulation program for training CASE students: Best practice diagnostic procedures for children with speech-language disorders*. Unpublished paper, CASE Western University, Cleveland, OH.